

Skin care - fake tans

Every year, 1600 Australians die from skin cancer. Both long-term sun exposure and sunburn can cause skin cell damage, which can lead to the development of skin cancer. People with fair skin are at higher risk than people with darker skin. Over the past 20 years or so, campaigns to heighten awareness of skin cancer have resulted in fewer people sunbathing. However, the desire for the appearance of tanned skin is still high, especially among younger people who tend to be influenced by fashion.

Apart from sunbathing, the options include fake tanning lotions, tan accelerators and solariums. Each option carries health risks. There is no 'safe' tan from the sun or a solarium.

How the skin tans

Skin cells in the top layer of skin (epidermis) produce a pigment called melanin that gives skin its natural colour. When skin is exposed to UV radiation, more melanin is produced, causing the skin to darken. This is a 'tan'. A tan is a sign that the skin is attempting to protect itself against UV damage. It is not a sign of good health.

A tan offers limited sunburn protection of around SPF3. However, a tan offers no protection against further DNA damage from ultraviolet radiation. Even without burning, UVB radiation ages the skin through irreparable DNA damage. Repeated doses of UVA radiation also contribute to long-term damage, even when no sunburn is experienced.

Fake tanning products

The range of fake tanning products include:

- **Topical dyes** - these lotions, creams or sprays are generally made up of vegetable dyes that stain the skin and give a temporary appearance of a tan. The dye is shed, along with dead skin cells, after a few days. No sun protection is offered. Tablets containing beta-carotene (vitamin A), which stained the skin a strange shade of orange, were once available. Beta-carotene gives vegetables like carrot and pumpkin their colour.
- **Tan accelerators** - are available in tablet or lotion form, these preparations contain the chemicals psoralens and tyrosine, among others. These chemicals contribute to the production of melanin, the pigment responsible for skin colour. With sensitised melanin cells, it is possible to get a suntan in a shorter time than usual. No sun protection is offered.
- **Solariums** - solariums can emit levels of UV radiation up to five times as strong as the summer midday sun. They tan the skin by radiating it with a concentrated dose of UV.

Fake tanning lotions are popular among young women

Fake tanning products are used by around nine per cent of the population over the age of 18 years, according to one recent South Australian study. Some other statistics from the study include:

- Women aged between 18 and 24 years are most likely to use fake tanning products (28 per cent).
- People with per annum household incomes of \$40,000 and over are more likely to use fake tanning products.
- People whose skin tends to burn in the sun are more likely to use fake tanning lotions than people whose skin turns brown.

Associated risks of fake tanning lotions

According to the South Australian study, women who use fake tanning lotions are twice as likely to suffer repeated bouts of sunburn than women who don't use these products. There was no association between fake tanning lotions and sunburn for men, perhaps because the sample size was small. People who use fake tanning lotions are more likely to use sunscreens (81 per cent) than those who don't use fake tan products (57 per cent), but are less likely to use other protective measures, such as hats and clothing.

A few fake tanning lotions include sunscreen, ranging from sun protection factors (SPF) 4 to 15. However, this protection would only last for a short time following application, and not for the entire time the fake tan lasts. Promoting a fake tanning product as protective against UV radiation may be misleading to consumers.

Associated risks of tan accelerators

There is no evidence that the topical use of tyrosine has any effect on melanin cells. When applied to the skin, tan accelerator products can cause painful conditions, including blistering. Psoralens should only be used under medical supervision to treat skin problems such as psoriasis. Using tan accelerators for a long time has also been associated with an increased risk of skin cancer. When taken by mouth, the possible side effects of tan accelerator products include nausea, headaches and itchy skin.

Associated risks of solariums

The more exposure to UV radiation from any source, the greater the chance of skin cancer and the more quickly skin will age. Compare the skin on the back of your hand with the inside of your thigh to see the damage caused by years of sun. A systematic review of the research on the link between skin cancer and solarium use concluded that using solariums before the age of 35 boosts the risk of melanoma by 75 per cent and also increases the risk of squamous cell carcinoma. A more recent review suggested that the increased risk of melanoma could be as high as 98 per cent.

Under the Trade Practices Act (2001) solarium operators are not allowed to advertise their services as 'safe'. Solarium use is not a safe way to tan, nor does it protect the skin from natural UV radiation. Having two solarium sessions within 48 hours is strongly discouraged because of the danger to skin if re-exposed to UV radiation when already damaged by the previous visit.

Other risks of solarium use include:

- The possibility of eye inflammation and damage
- Skin irritations, such as itching and rashes
- Sunburn
- Possible immune system changes.

Changes to Victorian regulation of solariums in February 2009 ban people under 18 years of age from using solariums and place greater responsibility on solarium operators to control the health risks to their clients.

Where to get help

- Your doctor
- Your local chemist
- Dermatologist
- Multilingual Cancer Information Line, Victoria – see website for contact details

Things to remember

- The desire for the appearance of tanned skin is still high, especially among younger Australians who tend to be influenced by fashion.
- Apart from sunbathing, the options include fake tanning lotions, tan accelerators and solariums.
- Most fake tanning lotions provide a safer way to change the tone of your skin but offer no sun protection.
- The UV radiation emitted by solariums contributes to skin damage and eye and an increased risk of skin cancer.
- Suntans or solarium tans are a sign your skin has been damaged by too much UV exposure.

Want to know more?

Go to [More information for support groups, related links and references.](#)

This page has been produced in consultation with, and approved by:

Cancer Council Victoria

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